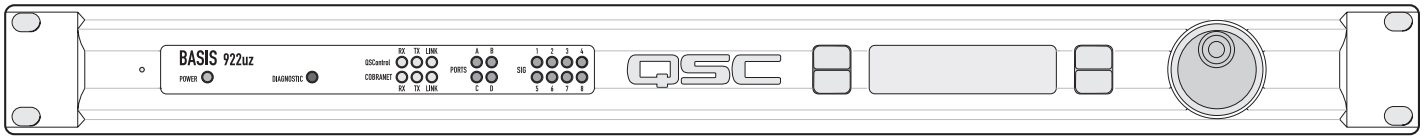
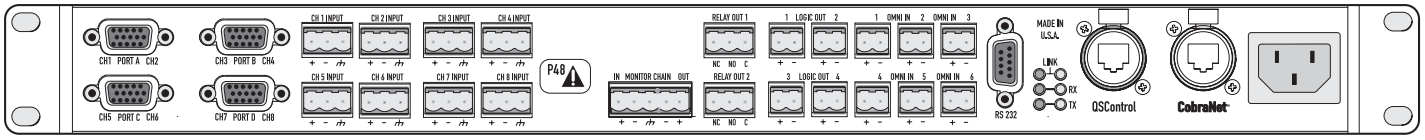
BASIS 922uz

QSControl.net™ Digital System





QSControl.net, QSC's next generation network audio system, achieves the seamless integration of the company's signal transport, control, processing, and monitoring technologies. QSControl.net brings together QSC's digital, power amplification and loudspeaker products into a unified system that enables the user to administrate it all via a fully integrated graphical user interface. The new generation BASIS™ devices are designed to operate under the company's QSControl.net platform.

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The BASIS platform meets the control, monitoring, signal transport and processing needs of amplification and loudspeaker systems over an Ethernet network. The BASIS 922uz units combine three distinct QSC technologies within a single hardware unit. Amplifier and loudspeaker control, monitoring and protection, configurable DSP, and CobraNet™ audio transport are seamlessly integrated into one powerful single RU package.

Through QSControl.net, QSC's BASIS and next-generation RAVE and DSP products can be networked together and controlled from a single software interface. In addition, multiple networked computers can be set up to control and monitor all of the units simultaneously.

Fixed Latency DSP

Users of most other configurable DSP systems are familiar with a variable latency inherent in the processing configuration. Add more processing blocks and you also add delay, whether you want it or not. QSC's DSP engine is unique in having a short and fixed processing latency through the DSP subsystem. When the A/D and D/A converters are included, the total analog-to-analog latency of a single unit is a negligible 2.354 milliseconds. QSC's fixed latency DSP is configurable DSP that stays fast and predictable from one configuration to the next.

For more information, visit www.qscontrol.net

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Inputs		DSP	Outputs	
Analog	CobraNet		DataPort	CobraNet
8 universal mic/line	16 of 32	24 x 24	4(8 channels)	32

Features

- Universal inputs - mic/line with pre-amps and phantom power
- Amplifier and loudspeaker control, monitoring and protection
- Configurable DSP functions and signal paths
- Fixed latency DSP engine
- Ethernet controllable
- CobraNet audio transport with new intuitive GUI
- Two Ethernet ports – CobraNet and control can be run over a single cable or be divided between the two ports. The CobraNet port is 100Base-T. The control port is 10Base-T
- Each unit can store eight design configurations that can be changed on the fly
- Snapshots can recall config or block and/or parameter settings
- THX™ approved for professional cinema applications

DSP functions include, but are not limited to:

- Matrix mixer – any size, up to 24 x 24
- Automixers – gain sharing
- Routers – any size, up to 24 x 24
- Gain controls – any channel count, up to 24
- Graphic equalizers
- Filters – high-pass, low-pass, all-pass, shelf, parametric, parametric shelf, Butterworth high and low-pass, Linkwitz-Riley high and low-pass, Bessel-Thomson high and low-pass
- Crossovers – Linkwitz-Riley, Butterworth, Bessel-Thomson in-phase, Bessel-Thomson symmetrical, 2-way, 3-way, and 4-way general purpose adjustable
- Compressors, peak limiters, AGC's, gates, dynamics processor
- Duckers – up to 8 channels, up to 60 seconds fade in and fade out times, priority mix
- Pink noise, white noise, sine generators
- Delays
- Macros – user-definable custom blocks with password protection

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Specifications

PERFORMANCE			
Dynamic Range (AES-17, -60 dB method, all sensitivities)	**In**	**Out**	**Thru**
Unweighted	> 110 dB	> 112 dB	108 dB
A weighted	> 113 dB	> 115 dB	111 dB
Distortion (20 Hz – 20 kHz, all sensitivities)			
Gain = 0 – 30 dB	< 0.008% THD+N	< 0.009% THD+N	< 0.008% THD+N
Gain > 30 dB	< 0.05% THD+N	< 0.009% THD+N	< 0.05% THD+N
Crosstalk (20 Hz – 20 kHz)			
Inter-channel (maximum)	> 75 dB		
Inter-channel (typical)	> 90 dB		
Intra-channel (maximum)	> 85 dB		
Intra-channel (typical)	> 100 dB		
Frequency Response			
20 Hz – 20 kHz (maximum)	+/- 0.5 dB		
20 Hz – 20 kHz (typical)	+/- 0.2 dB		
Audio Converters	24 bit, 48 kHz, in and out		
Mute	Infinite attenuation		
Delay	**Standard CobraNet™ latency**		**Low latency**
BASIS™ to Network	7.104 milliseconds		4.438 milliseconds
Analog input through full DSP chain to CobraNet output			
Network to BASIS	6.313 milliseconds		3.646 milliseconds
CobraNet input through full DSP chain to analog output			
BASIS to BASIS	8.083 milliseconds		5.417 milliseconds
Analog input through full DSP chain, over CobraNet network, through full DSP chain, to analog outputs			
BASIS in stand-alone mode	2.354 milliseconds (default group delay)		
Analog input through full DSP chain to analog outputs			
INPUTS/OUTPUTS			
Program Inputs	8 inputs		
Connector type	3-pin "phoenix style" (a.k.a. "Euro style") detachable terminal blocks		
Type	Electrically balanced		
Grounding	All shield terminals connected to chassis		
Pinout	1:+ / 2:- / 3:CHASSIS GND		
Input Impedance (nominal)	Balanced: 6.81k ohms / Unbalanced: 13.6k ohms		
Common-mode Rejection	20 Hz – 20 kHz (minimum): > 54 dB / 20 Hz – 20 kHz (typical): > 60 dB		
E.I.N. (maximum)	150Ω, 30 dB: -124.5 dBu / 150Ω, 60 dB: -125.0 dBu		
Input Sensitivities (variable)	Vrms: 0.9 mV to 15.46 V / dBu: -62.2 to +26 dBu / dBV: -64.4 to +23.7 dBV		
Phantom Power (per IEC 1938 [1996])	+48 V (software selectable)		
Program Outputs	8 outputs		
Connector Type	4 HD-15 DataPort connections		
Cable Type	QSC DataPort cable, QSC p-n DPC-x ("x" designates cable length in feet)		
Available "Stock" Lengths	1, 2, 3, 4, 5, 6, 10, and 20 ft., custom lengths available		
Maximum Qualified Length	328 ft. (100 m) using QSC DP cable only / Non QSC cable limited to 6 ft. (audio only)		
MONITOR			
Control Room Foldback Monitoring			
Connector type	5-pin "phoenix style" (a.k.a. "Euro style") detachable terminal blocks		
Pinout	1:+(input) / 2:-(input) / 3:CHASSIS GND / 4:-(output) / 5:+(output)		
Tap Points	8 internal input / 8 internal output / 8 amplifier (pre-, post-, amplifier) software selectable		
Monitor Input			
Monitor Signal (unit off)	Unity gain connection, relay bypass		
Maximum Level	+21 dBu		
Impedance (nominal)	10k ohms		
CMRR, 20 Hz – 20 kHz	> 54 dB		
Monitor Output			
Monitor	Sum of monitor input and signal from internal monitor tap point(s)		
Frequency Response (20 Hz – 20 kHz)	+/- 0.5 dB		
Distortion (20 Hz – 20 kHz)	< 0.05% at +4 dBu		
Noise Floor	> 90 dB		
Output Impedance (nominal)	100Ω		
Output Load (minimum)	600Ω		
Monitor Level			
Control Range (nominal)	0 dB to -95.5 dB in 0.5 dB steps		
CONTROL INPUTS/OUTOUTS			
Relay Outputs	2 discrete floating relay switch outputs		
Connector Type	3-pin "phoenix style" (a.k.a. "Euro style") detachable terminal blocks		
Configuration	Electromechanical relay		
Pinout	1:NC / 2:NO / 3:COM		
Switching Capacity (nominal)	1A 30 VDC		
Logic Outputs	4 discrete outputs		
Connector Type	2-pin "phoenix style" (a.k.a. "Euro style") detachable terminal blocks		
Configuration	Single-ended, TTL compatible		
Pinout	1:+(Signal) 2:-(CHASSIS GND)		
Omni Inputs	6 discrete inputs for TTL logic, voltage control or passive resistance		
Connector Type	2-pin "phoenix style" (a.k.a. "Euro style") detachable terminal blocks		
Configuration	Single-ended, ground referenced		
Pinout	1:+(Signal) / 2:-(CHASSIS GND)		
Normal Operating Range	Reads signals between 0-5 V nominally		
Potentiometer Operation	Use 10k ohms for full range		
Voltage Tolerance	+/- 48 V		
Current Output	0.5 mA with 10k pot (for passive resistive controls)		
RS-232 Port	Female DB9 connector (setup and diagnostics purposes only)		
QSControl Port	Neutrik Ethercon RJ45 ruggedized data connector		
CobraNet Port	Neutrik Ethercon RJ45 ruggedized data connector		
Indicators			
QSControl Status	Yellow Link, Tx, Rx, front panel / Green Link, Tx, Rx, rear panel		
CobraNet Status	Yellow Link, Tx, Rx, front and rear panel		
Power	Blue, front panel		
Diagnostic	Red, front panel		
DataPort Status (port)	Tri-state (red, green, yellow), front panel		
LCD Data Display	2 line x 16 character, backlit, front panel		
Signal Presence	Tri-state (red, green, yellow), front panel		

Specifications subject to change without notice.

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